CLAIMS:

1. A magnetic resonance imaging (MRI) device, comprising a diagnostic space, a main magnetic system for generating a main magnetic field in said diagnostic space, a gradient magnetic coil system comprising a gradient coil for generating at least one gradient of the main magnetic field, and noise reducing means for reducing noise that is generated as a result of vibrations of the gradient coil, characterized in that the noise reducing means comprise a sound-absorbing panel disposed between the gradient coil and the diagnostic space.

2. A magnetic resonance imaging (MRI) device according to claim 1, characterized in that the sound-absorbing panel has an absorption coefficient in the order of at least 0.5, more preferably in the order of at least 0.75 dB for at least part of the frequency range between 20 Hz and 4000 Hz.

3. A magnetic resonance imaging (MRI) device according to claim 1 or 2, characterized in that the sound-absorbing panel comprises channels having an open end and a closed end.

4. A magnetic resonance imaging (MRI) device according to claim 3, characterized in that said channels extend at least substantially in a direction parallel to the direction between the diagnostic space and the gradient coil.

5. A magnetic resonance imaging (MRI) device according to claim 3 or 4, characterized in that the channels extend at least substantially perpendicularly to the direction between the diagnostic space and the gradient coil, at least on the side of their closed ends.

6. A magnetic resonance imaging (MRI) device according to claim 3, 4 or 5, characterized in that the open ends of at least some of the channels are present on the side of the associated channels that faces towards the diagnostic space.

7. A magnetic resonance imaging (MRI) device according to claim 3, 4 or 5, characterized in that the open ends of at least some of the channels are present on the side of the associated channels that faces towards the gradient coil.

8. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 7, characterized in that the cross dimension of at least a part of the channels on the side of the associated open ends is maximally 15 mm, preferably maximally 10 mm.

9. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 8, characterized in that the cross dimension of at least a part of the channels on the side of the associated closed ends thereof is different from a cross dimension of the part of the channels on the side of the associated open ends.

10. A magnetic resonance imaging (MRI) device according to claim 9, characterized in that the cross dimension of the part of the channels on the side of the associated closed ends is larger than a cross dimension of the part of the channels present on the side of the associated open ends.

11. A magnetic resonance imaging (MRI) device according to claim 10, characterized in that the proportion between the cross dimension of the part of the channels on the side of the associated closed ends and the cross dimension of the part of the channels on the side of the associated open ends is at least in the order of 2.5, preferably at least in the order of 4.0.

12. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 9, characterized in that the minimum spacing between adjacent channels at the location of the associated maximum cross dimension of the adjacent channels is maximally 50% of the sum of the associated maximum cross dimensions, preferably maximally 35% of the sum of the associated maximum cross dimensions.

13. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 12, characterized in that the dimensions of the channels of the sound-absorbing panel are mutually different.

14. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 13, characterized in that the sound-absorbing panel is provided with a radio frequency transmission coil system for generating and/or receiving a radio frequency signal in the diagnostic space.

15. A magnetic resonance imaging (MRI) device according to claim 14, characterized in that the radio frequency transmission coil system comprises an electrically conductive winding which extends at least in part between at least some of the channels.

16. A magnetic resonance imaging (MRI) device according to claim 14, characterized in that the radio frequency transmission coil system comprises at least one electrically conductive layer, with which the sound-absorbing panel is coated on the side of the diagnostic space and in which openings are present at the location of any open ends of the channels that may be present on the side of the diagnostic space.

17. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 16, characterized in that the sound-absorbing panel is built up of a number of abutting, preferably glued-together subpanels.

18. A magnetic resonance imaging (MRI) device according to any one of the claims 3 - 17, characterized in that the sound-absorbing panel is coated between the open ends with a sound-absorbing material having an absorption coefficient of at least 0.5 for at least part of the frequency range between 20 Hz and 4000 Hz.

19. A magnetic resonance imaging (MRI) device according to any one of the preceding claims, characterized in that said sound-absorbing panel comprises glass wool.